University : Pharos University in Alexandria
Faculty : Faculty of Dentistry

Program Specification

A. Basic Information:

1- Program Title: بكالوريوس طب وجراحه الفم والأسنان

2- Program Type: **Single** [✓] **Double** [ ] **Multiple** [ ]

3- Department (s) responsible for Program:

1. Oral Biology
2. Oral Pathology
3. Oral Diagnosis & Radiology, Oral Medicine & Periodontology
4. Pediatric & Community Dentistry
5. Oral & Maxillofacial Surgery
6. Restorative Dentistry & Dental Biomaterials
7. Prosthetic Dentistry (Fixed & Removable Prosthodontics)
8. Orthodontics

There are several non-dental & medical courses taught within the program by faculty staff members from other faculties in PUA University (Faculty of Pharmacy, PUA);& Alexandria University (Faculty of Science, & Faculty of Medicine).These courses include: Chemistry, Biochemistry, Biophysics, Botany & Genetics, Zoology, General Histology, Microbiology, General Pathology, Pharmacology, Dermatology, Otolaryngology, General Medicine, General Surgery and Ophthalmology.

- **Program coordination:** Vice dean of student affairs.

4. Date of program specifications approval: August 2018

B. Professional Information:

1. Program General Aims:

1.1 Provide integrative medical & dental sciences, practical & clinical skills for students to be able to manage oral & dental diseases efficiently;

1.2 Provide a scientific foundation for the basics of dental bioresearch & dental technology development.

1.3 Advance research perspectives within the faculty members;

1.4 Provide quality comprehensive clinical dental care services for a diverse community population within a value-driven system where the needs of patients are critically important and are addressed with high ethical standards;

1.5 Activate & motivate students & faculty members for life-long learning, continuing education & professional development;

1.6 Establish an ongoing self-sufficient internal quality assurance system to monitor & ensure the maintenance of high proper academic, professional, & ethical standards; and allow for collaborative scientific activities with international dental healthcare institutions.

2. Intended Learning Outcomes of Program (ILOs):

A. Knowledge and Understanding:

Upon completion of the program, the graduate must be able to:

A1. Describe the anatomical, cellular, biophysical and bimolecular structural organization of major body systems, as well as, their functions; which form the basis for describing growth, development, and physiology.

A2. Recognize the essentials of genetics, anatomical structures, biodiversity and physiological principles related to animal, plants, & human health, as well as, the interrelationship between organisms and between the functions of different systems of the human body.

A3. Describe the normal homeostasis, healing of wounds, mechanisms of body responses to trauma and diseases, as well as, the pharmacological action of drugs used.

A4. Describe the pathogenesis and patho-histological features of diseases affecting the body, oral and maxillofacial region, and genetic disorders.

A5. Describe the structure, progression and spread of different types of pathogens, pathophysiology of microbial diseases, and human immunology.

A6. Identify the structures and functions of teeth and associated structures, in health and disease, as well as, principles of occlusion, chronology and detailed morphology of primary, as well as, permanent teeth

A7. Classify the diseases and disorders affectinig the oral cavity and its associated structures, their predisposing factors, manifestations, and prognosis; together with the principles of their diagnosis, management and prevention.

A8. Discuss in details specific dental topics including:

A.8.1 The present theoretical and practical knowledge regarding the composition, manipulation and properties of all the dental materials used in the field of dentistry.

A.8.2 The normal structure of periodontium and variable periodontal diseases.

A.8.3 The microbiological & immunological aspects of different diseases and their oral manifestations, along with, diseases of concern in the dental practice.

A.8.4 The different oral lesions, their pathogenesis and differential diagnosis.

A.8.5 The basic principles or radiology, dental x-ray machines and interpretation of radiographs

A.8.6 Local anesthesia, pain and anxiety control.

A.8.7 The process of caries formation and progression, together with the basic principles of tooth restoration and root canal treatment.

A.8.8 The types of orthodontic problems, principles of diagnosis and treatment of various cases of malocclusion.

A.8.9 The principles and advances in restoring teeth by fixed and removable prosthodontics

A.8.10 The necessary information in behavior management, diagnosis, prevention and treatment of patients in primary, mixed, and early permanent dentition in Pediatric dentistry,

A.8.11 The basic Pharmacology and effects of drugs and therapeutics.

A.8.12 The types of oral and maxillofacial diseases and defects, together with the principles of their surgical and prosthetic management protocols.

A.8.13 The concept of Dental Public Health, epidemiology of several dental diseases, methods of oral health education and preventive dentistry.

A.8.14 The principles of examination, diagnosis, various diagnostic aids and new methods in data collection.

A9. Identify the sources of cross-infection and the essential means for infection control.

A10. Identify the health hazards from different dental biomaterials and fluorides.

A11. Recognize the medical emergencies that may occur in the dental surgery, as well as, their prevention and management methods, including basic life support and resuscitation.

A12. Describe basic principles of Chemistry, Biochemistry, pharmacokinetics and pharmacodynamics of major classes of drugs used in dental practice, in order to ensure safe prescription of the drugs to the dental patient.

A13 Identify the basic principles of oral health promotion, levels of prevention of oral diseases, then, how these principles are applied in population based approaches.

A14. Define the various principles of medico-legal aspects & code of ethics upon which the practice of dentistry is based, especially those relating to treatment of patients and involvement of patients in research.

A15. Define the broad principles of scientific research methodologies, scientific writing and the evaluation of evidence that are necessary for an evidence-based approach in the dental field.

A16. Summarize the basics of dental practice management and the role of dental personnel.

B. Intellectual Skills:

B1. Integrate the structure of the body systems with their function and concepts of physiology with emphasis on clinical relevance.

B2. Distinguish the signs and symptoms, pathological and histological structures, as well as, risk factors of various diseases.

B3. Evaluate patient's general health status & its relation to other body systems & oral tissues.

B4. Interpret extra and intra oral radiographs in order to recognize health and disease condition.

B5. Analyze all the collected diagnostic data, including, patient's history, laboratory and radiographic investigations, as well as, clinical examination, to solve clinical problems based on current evidence

B6. Design an appropriate, sequenced, and prioritized treatment plan relevant to patients' needs and requirements, whether children, adults or specific populations.

B7. Compare between the different types, designs and techniques of teeth restorations, prosthodontics, as well as, restorative materials.

B8. Justify specific items of infection control required for safe working environment.

B9. Integrate the basic biomedical, behavioral and dental sciences with signs, symptoms and physical findings to reach an accurate differential diagnosis.

B10. Differentiate between normal and abnormal features that are particularly relevant to oro-facial region.

B11. Assess and evaluate the effects of medications taken by the patient on dental management.

B12. Differentiate between the various conditions related to the medico-legal aspects of the dental profession.

B13. Correlate the basic principles of scientific research to the regulations of evidence-based dentistry in order to stimulate critical thinking to allow students to acquire research methods & skills in the collection, evaluation & presentation of evidence.

B14. Investigate the recent materials, and updated technologies in diagnosis and their clinical application in treatment and prevention of dental and oral problems.

B15. Integrate the concepts of chemistry, biophysics, genetics and cell differentiation with formulation of hypothesis

C. Professional & Practical Skills:

C1. Apply current infection control guidelines as well as practice management protocols for a proper effective safe environment.

C2. Build database including comprehensive patient's history and all diagnostic data for patient illness.

C3. Perform systematic clinical examination including general, extra-oral, & intraoral procedures;

C4. Practice appropriate investigations & radiographic examination.

C5. Interpolate consultation with other health care professionals, when needed, especially if systemic diseases are suspected.

C6. Discover oral & maxillofacial diseases, disorder and pathological conditions, as well as, etiological and/or risk factors that may contribute to disease process.

C7. Practice comprehensive clinical care, encompassing patient assessments after taking patients consent for treatment procedures

C8. Modify level of patient's anxiety and apprehension for better cooperation in different age groups.

C9. Perform a range of pre-clinical and clinical procedures which are within the scope of general dentistry, including:

C.9.1 Use properly different dental materials and handle different instruments and equipment.

C.9.2 Operate the steps of oral surveying and designing then the different laboratory procedures for preparation of various restorations/appliances.

C.9.3 Practice application of oral preventive procedures

C.9.4 Practice application of different local anesthetic techniques.

C.9.5 Practice extraction of teeth and removal of roots when necessary.

C.9.6 Practice different types of teeth preparations for various types of restorations.

C.9.7 Practice Construction of fixed and/or removable Prosthetic appliances for missing teeth and various procedural preparatory aids (trays, record blocks …etc.)

C.9.8 Practice treatment of gingival & periodontal diseases.

C.9.9 Practice different techniques of root canal preparation, obturation, as well as, periradicular lesions surgical and non-surgical management.

C.9.10 Practice implant insertion, and superstructure fixed restoration/ over dentures in recommended cases.

C10. Manage dental and medical emergencies which may occur in dental practice and perform basic life support measures.

C11. Prescribe appropriate pharmaceutical, therapeutic and preventive agents taking into consideration drug and patient factors.

C12. Monitor patients to ensure quality-control comprehensive dental management.

C13. Manipulate Electron and Light microscope for analysis of various, histological and pathological preparations, anatomical sections, as well as, microorganisms and microbiological smears.

C14. Apply laboratory procedures for classifying different types of enzymes, macromolecules, biochemical preparations, as well as, inorganic chemical reactions.

C15 Illustrate histological and anatomical structures for normal or pathological cells tissues and body organs, as well as, their distribution.

C16 Use diagnostic criteria in disease detection and indices in disease measurement.

C17. Use didactic knowledge to solve dental and oral problems.

D. General Skills:

D1. Practice teamwork skills appropriate for working within a multi-skilled team.

D2. Apply efficient flexible Communication Skills with different multicultural, & diverse groups of community in general.

D3. Accept constructive criticism with positive reaction and self -valuation of professional abilities, as well as, performance

D4. Appraise ethical professional attitude including confidentiality, compassion, empathy, integrity, responsibility & tolerance.

D5. Improve students' innovative & creative skills.

D6. Use available technologies & resources to ensure professional development & life-long learning.

D7. Recognize the professional guidelines to ensure quality assurance in the clinical work.

D8. Practice managing of workload and personal stress in the framework of proper performance and management.

3. Academic Standards of Program specification:

The National Academic Reference Standards (NARS) of an undergraduate program in dentistry.

Relation between NARS vs Program ILO's

I- Program graduates' attributes Vs NARS:

Program graduates' attributes	NARS	Items
(1) Understand all the biomedical and dental sciences that form the basis of human health and disease.	2. Knowledge and Understanding Graduate must know and understand 2.1, 2.2, 2.4	2.1 The interrelationship between different systems of the human body. 2.2 The principles of pathogenic mechanisms and manifestations of human disease which are of dental significance. 2.4 Prevention and management of medical emergencies
	4. Intellectual skills Graduate must be able to 4.1, 4.2, 4.3, 4.4,	4.1 Integrate basic biomedical, behavioral and dental sciences with signs, symptoms and physical findings of the disease 4.2 Differentiate between normal and abnormal features that are particularly relevant to dental practice. 4.3 Identify, prioritize and generate a list of potential patient's clinical problems. 4.4 Analyze, interpret, and integrate collected diagnostic data to solve clinical problems based on current evidence.
(2) Have competency in all the practical and clinical skills needed in managing oral diseases and in performing dental procedures.	3. Practical and Clinical Skills Graduate must be able to 3.1, 3.2, 3.4, 3.8	3.1 Establish a comprehensive patient's history, perform clinical examination, request and evaluate appropriate investigations. 3.2 Review the body systems and consult with other health care professionals. 3.4 Perform a range of clinical procedures which are within the scope of general dentistry 3.8 Prescribe and monitor the effects of appropriate pharmaceutical agents taking into consideration drug and patient factors.
	4. Intellectual skills Graduate must be able to 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7	4.1. Integrate basic biomedical, behavioral and dental sciences with signs, symptoms and physical findings of the disease. 4.2. Differentiate between normal and abnormal features that are particularly relevant to dental practice 4.3 Identify, prioritize and generate a list of potential patient's clinical problems. 4.4 Analyze, interpret, and integrate collected diagnostic data to solve clinical problems based on current evidence. 4.5 Design appropriate treatment plans for different dental problems. 4.6 Assess and evaluate the effects of medications taken by the patient on dental management. 4.7 Reason deductively in clinical problem solving

(3) Be able to deliver professional dental service encompassing all the ethical and evidence-based approaches, as well as, continues professional development.	2. Knowledge and Understanding Graduate must know and understand 2.7, 2.8	2.7 Principles of evidence-based dentistry and its relation to scientific research 2.8 Ethical and medico-legal aspects relevant to the practice of dentistry and research
	3. Practical and Clinical Skills Graduate must be able to 3.1, 3.7	3.1 Establish a comprehensive patient's history, perform clinical examination, request and evaluate appropriate investigations. 3.7 Manage dental and medical emergencies which may occur in dental practice and perform basic life support measures.
	4. Intellectual skills Graduate must be able to 4.3, 4.4, 4.5	4.3 Identify, prioritize and generate a list of potential patient's clinical problems. 4.4 Analyze, interpret, and integrate collected diagnostic data to solve clinical problems based on current evidence. 4.5 Design appropriate treatment plans for different dental problems.
	5. General and transferable skills The graduate must be able to 5.3, 5.4, 5.5, 5.9	5.3 Recognize and effectively utilize all sources for continuing professional development and life-long learning. 5.4 Adopt a creative attitude in an ethical and scientific approach. 5.5 Self evaluate professional abilities, performance, and progress 5.9 Prioritize workload and manage personal stress in the framework of proper performance and management.
(4) Be able to provide a comprehensive practice management.	2. Knowledge and Understanding Graduate must know and understand 2.6	2.6 Basis of practice management
	5. General and transferable skills The graduate must be able to 5.8, 5.9	5.8 Recognize the basic concepts of quality assurance and practice management 5.9 Prioritize workload and manage personal stress un the framework of proper performance and management
(5) Have good interpersonal and communication skills when delivering services, as well as the ability to work in teams.	2. Knowledge and Understanding Graduate must know and understand 2.9	2.9 Social and psychological issues relevant to dental care with emphasis on behavioral management.
	3. Practical and Clinical Skills Graduate must be able to 3.6	3.6 Control different levels of patient's anxiety and apprehension in different age groups.
	5. General and transferable skills The graduate must be able to	5.1 Work in collaboration as a member of an interdisciplinary team. 5.2 Communicate effectively in multicultural work environment using verbal and non-verbal means.
(6) Be able to utilize available dental technologies and can respond to the ongoing advances in the dental field.	5. General and transferable skills The graduate must be able to 5.3, 5.7	5.3 Recognize and effectively utilize all sources for continuing professional development and life-long learning. 5.7 Use information technologies to enrich and diversify professional experience.

(7) Be motivated to adopt a life-long learning approach, and recognize the basics of research.	2. Knowledge and Understanding Graduate must know and understand 2.7, 2.8	2.7 Principles of evidence-based dentistry and its relation to scientific research 2.8 Ethical and medico-legal aspects relevant to the practice of dentistry and research
	5. General and transferable skills The graduate must be able to 5.3	5.3 Recognize and effectively utilize all sources for continuing professional development and life-long learning.
(8) Have innovative and creative attitudes and practice critical thinking	4. Intellectual skills Graduate must be able to 4.4, 4.5, 4.7	4.4 Analyze, interpret, and integrate collected diagnostic data to solve clinical problems based on current evidence. 4.5 Design appropriate treatment plans for different dental problems. 4.7 Reason deductively in clinical problem solving
	5. General and transferable skills The graduate must be able to 5.4	**5.4** Adopt a creative attitude in an ethical and scientific approach.
(9) Be able to maintain a safe working environment	2. Knowledge and Understanding Graduate must know and understand 2.5	2.5 Maintenance of infection control and a safe working environment.
	3. Practical and Clinical Skills Graduate must be able to 3.5	3.5 Apply current infection control guidelines
(10) Be aware of the community needs and involved in the community health services.	2. Knowledge and understanding Graduate must know and understand 2.3	2.3 Basis and significance of oral health promotion, nutritional education and prevention of oral diseases in population based approaches.
	5. General and transferable skills The graduate must be able to 5.6	5.6 Recognize professional responsibility towards the surrounding community

II-Program ILOs Vs NARS:

NARS		Program ILOs	NARS		Program ILOs
Knowledge and Understanding	2.1	A1, A2, A3	**General and transferable skills**	5.1	D1
	2.2	A4, A5, A6, A7		5.2	D2
	2.3	A8, A13		5.3	D6
	2.4	A11, A12		5.4	D5
	2.5	A9, A10		5.5	D3
	2.6	A16		5.6	D4
	2.7	A15		5.7	D6
	2.8	A14		5.8	D7
	2.9	A8		**5.9**	**D8**

Intellectual skills	4.1	B1, B2, B3, B5, B9, B13
	4.2	B2, B3, B4, B10
	4.3	B5, B6
	4.4	B5, B12, B13, B14
	4.5	B6, B7
	4.6	B11
	4.7	B8, B15
Practical and clinical skills	3.1	C2,C3,C4
	3.2	C3, C5, C13, C15
	3.3	C6, C13, C14, C15, C16
	3.4	C7
	• 3.4.1	C9.3
	• 3.4.2	C9.4
	• 3.4.3	C9.5
	• 3.4.4	C6
	• 3.4.5	C4
	• 3.4.6	C9.8, C9.9, C12
	• 3.4.7	C9.1, C9.6
	• 3.4.8	C9.9
	• 3.4.9	C9.2, C9.7, C9.10
	• 3.4.10	C6, C9.2
	• 3.4.11	C9.1, C9.9
	3.5	C1
	3.6	C8
	3.7	C10
	3.8	C11

NARS	مايتضمنه المعيار NARS	ILOs
Knowledge and understanding	**2.1 The interrelation ship between different systems of the human body**	A1, A2, A3
	2.2 The principles of pathogenic mechanisms and manifestations of human disease which are of dental significance.	A4, A5, A6, A7
	2.3 Basis and significance of oral health promotion, nutritional education and prevention of oral diseases in population basedapproaches.	A8, A13
	2.4. Prevention and management of medical emergencies.	A11, A12

	2.5. Maintenance of infection control and a safe working environment.	A9, A10
	2.6. Basis of practice management	A16
	2.7. Principles of evidence-based dentistry and its relation to scientific research.	A15
	2.8. Ethical and medico-legal aspects relevant to the practice of dentistry and research	A14
	2.9. Social and psychological issues relevant to dental care with emphasis on behavioral management.	A8
Intellectual skills	**4.1. Integrate basic biomedical, behavioral and dental sciences with signs, symptoms and physical findings of the disease.**	B1, B2, B3, B5 , B9, B13
	4.2. Differentiate between normal and abnormal features that are particularly relevant to dental practice.	B2, B3, B4, B10
	4.3. Identify, prioritize and generate a list of potential patient's clinical problems.	B5, B6
	4.4. Analyze, interpret and integrate collected diagnostic data to solve clinical problems based on current evidence.	B5, B12, B13, B14
	4.5. Design appropriate treatment plans for different dental problems	B6, B7
	4.6. Assess and evaluate the effects of medications taken by the patient on dental management	B11
	4.7. Reason deductively in clinical problem solving	B8, B15
Practical and clinical skills	**3.1 Establish a comprehensive patient's history, perform clinical examination, request and evaluate appropriate investigations.**	C2, C3, C4
	3.2 Review the body systems and consult with other health care professionals, when required.	C3.3, C5, C13, C15
	3.3 Detect abnormal and pathological conditions, as well as etiological and/or risk factors that may contribute to disease process.	C6, C13, C14, C15, C16

	3.4 Perform a range of clinical procedures which are within the scope of general dentistry	C7
	3.4.1 . Applications of preventive procedures	C9.3
	3.4.2. Application of different local anesthetic techniques	C9.4
	3.4.3. Extraction of teeth and removal of roots when necessary	C9.5
	3.4.4. Diagnosis of commonly encountered oral lesions	C6
	3.4.5. Performance of the necessary radiographs	C4
	3.4.6. Performance of non-surgical periodontal treatment and monitor treatment outcomes	C9.8, C9.9, C12
	3.4.7 Restorations of carious and non-carious tooth defects with emphasis on basic concepts of esthetics	C9.1, C9.6
	3.4.8. Basic endodontic procedures	C9.9
	3.4.9. Rehabilitation of partially and completely edentulous patients	C9.2, C9.7, C9.10
	3.4.10. Diagnosis and prevention of developing malocclusions	C6, C9.2
	3.4.11. Basic endodontic treatment	C9.1, C9.9
	3.5. Apply current infection control guidelines.	C1
	3.6. Control different levels of patient anxiety and apprehension in different age groups.	C8
	3.7 Manage dental and medical emergencies which may occur in dental practice and perform basic life support measures.	C10

	3.8 Prescribe and monitor the effects of appropriate pharmaceutical agents taking into consideration drug and patient factors.	C11
General and Transferable skills	**5.1 Work in collaboration as a member of an interdisciplinary team.**	D1
	5.2 Communicate effectively in multicultural work environment using verbal and non-verbal means.	D2
	5.3 Recognize and effectively utilize all sources for continuing professional development and life-long learning.	D6
	5.4. Adopt a creative attitude in an ethical and scientific approach.	D5
	5.5 Self evaluate professional abilities, performance, and progress	D3
	5.6 Recognize professional responsibility towards the surrounding community	D4
	5.7 Use information technologies to enrich and diversify professional experience.	D6
	5.8 Recognize the basic concepts of quality assurance and practice management	D7
	5.9 Prioritize workload and manage personal stress in the framework of proper performance and management.	D8

		Program ILOs (Knowledge and Understanding)															
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16
NARS ILOs (Knowledge and Understanding)	2.1	■	■	■													
	2.2				■	■	■	■									
	2.3								■					■			
	2.4											■	■				
	2.5									■	■						
	2.6																■
	2.7															■	
	2.8														■		
	2.9								■								

		Program ILOs (Intellectual Skills)														
		B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
NARS ILOs (Intellectual Skills)	4.1	■	■	■		■				■				■		
	4.2		■	■	■						■					
	4.3					■	■									
	4.4					■							■	■	■	
	4.5						■	■								
	4.6											■				
	4.7								■							■

NARS ILOs (Practical & Professional Skills)	Program ILOs (Practical & Professional Skills)																
		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17
	3.1		■	■	■													
	3.2			■		■								■		■		
	3.3						■							■	■	■	■	
	3.4							■										
	3.4.1									9.3								
	3.4.2									9.4								
	3.4.3									9.5								
	3.4.4							■										
	3.4.5					■												
	3.4.6									9.8 9.9			■					
	3.4.7									9.1 9.6								
	3.4.8									9.9								
	3.4.9									9.2 9.7 9.10								
	3.4.10						■			9.2								
	3.4.11									9.1 9.9								
	3.5	■																
	3.6								■									
	3.7										■							
	3.8											■						

Note: C17 is extra skill

		Program ILOs (General & Transferable Skills)							
		D1	D2	D3	D4	D5	D6	D7	D8
NARS ILOs (General & Transferable Skills)	5.1	■							
	5.2		■						
	5.3						■		
	5.4					■			
	5.5			■					
	5.6				■				
	5.7						■		
	5.8							■	
	5.9								■

4. External references for Standards (Benchmarks):

No benchmarks.

5. Program Structure and Contents:

a- ***Program duration:*** Five year- Program / 10 semesters / 180 weeks

b- ***Program structure:***

No. of hours per week: Lectures 107 Lab/Tutorial 104/18 Clinical 92

Total 209

No. of credit hours: Compulsory 207 Elective 2

Basic Sciences courses	64	30.6 **%**
Medical & Dental Sciences	123	58.9 **%**
Complementary Sciences	12	5.7 **%**
Discretetionary Subjects	10	4.8 **%**

Practical/Field training: Internship training/Rotation

*c- **Program course Levels (in credit-hours system):***

- **First year / First level: required to pass 15 units distributed as follows: -**
  Compulsory…15… Elective…0… Optional…0….
- **First year / Second Level: required to pass16 units distributed as follows: -**
  Compulsory…16… Elective…0… Optional …0…
- **Second year / First Level: required to pass 18 units distributed as follows:-**
  Compulsory…16… Elective…2… Optional……0……
- **Second year / Second Level: required to pass 18 units distributed as follows: -**
  Compulsory…18… Elective…0… Optional…0…
- **Third year / First Level: required to pass 23 units distributed as follows:-**
  Compulsory…23… Elective…0… Optional…0……
- **Third year / Second Level: required to pass 22 units distributed as follows: -**
  Compulsory…22… Elective…0… Optional…0…
- **Fourth year / First Level: required to pass24 units distributed as follows: -**
  Compulsory…24… Elective…0… Optional…0……
- **Fourth year / Second Level: required to pass 23 units distributed as follows: -**
  Compulsory…23… Elective…0… Optional…0……
- **Fifth year / First Level: required to pass 25 units distributed as follows:**
  Compulsory…25… Elective…0… Optional……0……
- **Fifth year / Second Level: required to pass25 units distributed as follows: -**
  Compulsory…25… Elective…0… Optional…0…

d- Program Courses

a. Compulsory:

Course Code	Course Title	No. of Units	Hours per Week			Grade & Level	Semester
			Lect.	Tut.	Lab/clinic.		
UC 01	Communication Skills	2	1		2	First year	1st
UEC 01	Computer Skills & Programming Concepts 1	2	1		2		
CHM 111	Chemistry 1	2	1		2		
OBD 111	Dental Anatomy 1	3	1		4		
BCM 111	Biochemistry 1	2	1		2		
ZOL 111	Zoology 1	2	1		2		
BOT 111	Botany & Genetics 1	2	1		2		
	Total semester credit hours	15					
UGE 01	English 1	2		4	2	First year	2nd
UEC 02	Computer Skills & Programming Concepts 2	2	1		2		
CHM 122	Chemistry 2	2	1		2		
OBD 122	Dental Anatomy 2	3	1		4		
BPH 111	Biophysics	3	2		2		
ZOL 122	Zoology 2	2	1		2		
BOT 122	Botany & Genetics 2	2	1		2		
	Total semester credit hours	16					
UGE 02	English 2	2		4	2	Second year	3rd
RDM 211	Dental Biomaterial 1	2	1		2		
BCM 221	Biochemistry 2	2	1		2		
PHY 211	General Physiology 1	3	2		2		
HST 211	General & Systemic Histology 1	2	1		2		
ANT 211	Human Anatomy 1	3	2		2		
PTH 212	General Pathology 1	2	1		2		
GEN 211	Principles Of Law , Human Rights & Ethics	2	2				
	Total semester credit hours	18					
UGE 03	English 3	2		4	2	Second year	4th
ANT 222	Human Anatomy 2	3	2		2		
PHY 222	General Physiology 2	3	2		2		
HST 222	General & Systemic Histology 2	2	1		2		
OB 212	Oral Biology & Embryology 1	3	2		2		
RDM 222	Dental Biomaterial 2	3	2		2		

	Elective	2	2				
	Total semester credit hours	18					
RD 311	Restorative Dentistry 1	3	1		4	Third Year	5th
FPR 311	Fixed Prosthodontic 1	2	1		3		
RPR 311	Removable Prosthodontics 1	4	2		4		
MCR 311	General Microbiology & Immunology 1	2	1		2		
PHM 311	Pharmacology 1	2	1	2			
OPTH 311	Oral Pathology 1	3	2		2		
OB 321	Oral Biology & Embryology 2	3	2		2		
PTH 321	General Pathology 2	2	1		2		
UGA 03	Arabic Language Skills	2	2				
	Total semester credit hours	23					
RD 322	Restorative Dentistry 2	3	1		4	Third year	6th
FPR 322	Fixed prosthodontic 2	2	1		3		
RPR 322	Removable Prosthodontics 2	4	2		4		
RDE 312	Endodontics 1	2	1		2		
MCR 322	Oral Microbiology & Immunology 2	2	1		2		
PHM 322	Pharmacology 2	2	1	2			
OPTH 322	Oral Pathology & Forensic Dentistry 2	3	2		2		
CD 312	Dental Clinic Management & Infection Control	2	1	2			
OMR 312	Dental Radiology	2	1		2		
	Total semester credit hours	22					
RD 431	Restorative Dentistry 3	3	1		4	Forth year	7th
FPR 431	Fixed Prosthodontic 3	2	1		3		
RPR 431	Removable Prosthodontics 3	4	2		4		
RDE 421	Endodontics 2	2	1	2			
OS 411	Local Anaesthesia & Pain Control	2	1		2		
OMD 411	Oral Medicine & Diagnosis 1	3	2		2		
PI 411	Periodontology 1	2	1		2		
OR 411	Orthodontics 1	2	1	2			

GMD 411	General Medicine, Dermatology & Venereal Diseases 1	2	1		2		
GSR 411	General Surgery , E.N.T. & Ophthalmology 1	2	1		2		
	Total semester credit hours	24			4		
RD 442	Restorative Dentistry 4	3	1		4	Forth year	8th
FPR 442	Fixed Prosthodontic 4	2	1		3		
RPR 442	Removable Prosthodontics 4	4	2		4		
RDE 432	Endodontics 3	2	1		2		
OS 422	Oral Exodontia	2	1		2		
OMD 422	Oral Medicine 2	2	1		2		
PI 422	Periodontology 2	2	1		2		
OR 422	Orthodontics 2	2	1	2			
GMD 422	General Medicine, Dermatology & Venereal Diseases 2	2	1		2		
GSR 422	General Surgery , E.N.T. & Ophthalmology 2	2	1		2		
	Total semester credit hours	23					
RD 551	Restorative Dentistry 5	3	1		4	Fifth year	9th
FPR 551	Fixed Prosthodontic 5	3	1		4		
RPR 551	Removable Prosthodontics (Advanced) 5	4	2		4		
RDE 541	Endodontics 4	2	1		2		
PDCD 511	Pediatric Dentistry 1	4	2		4		
PDCD 531	Community Dentistry 1	2	1	2			
OS 531	Oral & Maxillofacial Surgery & Dental Implants	3	2		2		
OMD 531	Oral Medicine 3	2	1		2		
PI 531	Periodontology 3	2	1		2		
	Total semester credit hours	25					
RD 562	Restorative Dentistry 6	3	1		4	Fifth year	10th
FPR 562	Fixed Prosthodontic 6	3	1		4		
RPR 562	Removable Prosthodontics (Advanced) 6	4	2		4		
RDE 552	Endodontics 5	2	1		2		
PDCD 522	Pediatric Dentistry 2	4	2		4		
PDCD 542	Community Dentistry 2	2	1	2			
OS 542	Oral & Maxillofacial Surgery &General Anaesthesia	3	2		2		
OMD 542	Oral Medicine 4	2	1		2		
PI 542	Periodontology 4	2	1		2		
	Total semester credit hours	25					

b. Elective:

Code	Course	No. of Units	level	
ELC 01	The ethics of Dentistry	2	-	2
ELC 02	Forensic dentistry	2	-	2
ELC 03	Dental Photography	2	-	2

Course Description

Course Code or Number: UEC 01
Course Title: Computer skills and programming concepts 1
Contents: This course will enable students to use computers for professional, educational and business problem solving. It will also introduce students to computer terminology, on-line information resources, hardware peripherals, CD-ROM databases, programs and multimedia computing systems that pharmacists can use in their practice.

Course Code or Number: UC 01
Course Title: Communication skills
Contents:

Course Code or Number: BCM 111
Course Title: Biochemistry (I)
Contents: This course deals with the basic principles and concepts of medical biochemistry. Protein structure and function, enzyme action, chemistry of carbohydrates, nutrition as vitamins and minerals, DNA and RNA structure and function.

Course Code or Number: CHM 111
Course Title: Chemistry 1
Contents: Study the periodic table and its elements, Gas laws, liquid and solid states, Solubility and solutions, chemical equilibrium, Thermodynamics and Analytical Chemistry atoms, molecules and ions. Atomic structure, electronic configuration also basic concepts of chemical bonding, stoichiometry (Mass and Moles of substance) and finally chemical reactions

Course Code or Number: OBD 111
Course Title: Dental Anatomy
Contents: Study the principles of dental anatomy, normal anatomic, physiologic, and biomechanical relationships of the dental structures for

diagnosis and treatment of oral pathology as it involves the dentition, identify, describe, and reproduce in drawings and wax, the morphology of permanent teeth from both an external perspective and a cross-sectional view, discuss the relationships between teeth and supporting structures,

Course Code or Number: ZOL 111
Course Title: Zoology 1
Contents: branches of Zoology and the animal cells. Cell biology, histology, and physiology. Types of cell division, animal tissues, and the physiology of the various mammalian systems

Course Code or Number: BOT 111
Course Title: Botany and genetics 1
Contents: basic information about the principles of genetics at the molecular level, gene structure, function and regulation in addition to cancer as a consequence of gene alterations. The practical study includes types of cell division and tissue organization in plants

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Course Code or Number: UEC 02
Course Title: Computer skills and programming concepts 2
Contents: This course will enable students to use computers for professional, educational and business problem solving. It will also introduce students to computer terminology, on-line information resources, hardware peripherals, CD-ROM databases, programs and multimedia computing systems that pharmacists can use in their practice.

Code or Number: BPH 111
Course Title: Biophysics
Contents: Heat and laws governing it, geometrical optics, physical optics, and types of dispersing system. Electricity, electric & magnetic flux. Modern physics. X-ray, laser, wave duality, and Properties of matter.

Course Code or Number: UGE 01
Course Title: English (I)
Contents: A course is designed to establish effective reading, writing, oral/aural, and study skills. Emphasis on essay writing and Academic style and task-based work are stressed.

Course Code or Number: ZOL 122
Course Title: Zoology 2
Contents: nutrition, digestion, respiration, circulation, and the nervous systems.

Course Code or Number: OBD 122
Course Title: Dental Anatomy 2
Contents: Study the principles of dental anatomy, normal anatomic, physiologic, and biomechanical relationships of the dental structures for diagnosis and treatment of oral pathology as it involves the dentition, identify, describe, and reproduce in drawings and wax, the morphology of permanent teeth from both an external perspective and a cross-sectional view, discuss the relationships between teeth and supporting structures,

Course Code or Number: CHM 122
Course Title: Chemistry
Contents: The Course includes Organic Chemistry and Aromatic Compounds.

Course Code or Number: BOT122
Course Title: Botany and Genetics 2
Contents:
the structural, reproductive and nutritional features of the cellular forms of life. Representatives of sub-cellular life forms including gene and non-gene creatures are also considered. The practical study covers an introduction to plant anatomy, cell divission and biodiversity.

After completing this course, students should be able to:

1. Describe DNA structure, function and gene technology.
2. Become familiar with the terminology of classical and molecular genetics.
3. Recognize a group of genetic disorders.
4. Practice light microscopy as a tool of investigating anatomical structures.

Course Code or Number: ANT 211
Course Title: Human Anatomy I
Contents: An introduction to the anatomy of human body and its various systems, as well as embryology and development of the oral and maxillofacial region.

Course Code or Number: PTH 212
Course Title: General Pathology I

Contents: course involves a study of the general pathology concepts, inflammation, degeneration and repair, neoplasm and others.

Course Code or Number: RDM 211
Course Title: Dental Biomaterial I
Contents: The basic properties of dental biomaterials. This includes the physical chemical and mechanical properties of metals, ceramics and polymers, surface chemistry of materials, the wetting of various tooth surfaces by different liquids and the properties of composites.

Course Code or Number: UGE 02
Course Title: English 2
Contents: A required course designed to establish advanced reading and writing skills. Emphasis on essay writing as well as research techniques. The major project is an expository research paper. Academic styles are emphasized.
Pre-requisite: ENG 101.

Course Code or Number: BCM 221
Course Title: Biochemistry 2
Contents: This course covers metabolism of carbohydrates, lipids and protein, nucleic acids, hormones and second messengers and connective tissue biochemistry.
Pre-requisite: BCM 112

Course Code or Number: GEN 211
Course Title: Principles of Law & Human Rights & Ethics
Contents: Theoretical and historical introduction to human rights, on the premise that a sound understand of contemporary practice and debates requires grounding in their historical and theoretical roots and foundations

Course Code or Number: HST 211
Course Title: General and systemic Histology I
Contents: study LM & EM structure of the nucleus, cell membrane, cell organelles, and **different** types of cytoskeleton**.** The course also includes the study of various tissues epithelial tissues as skin and membranes**.** Different connective cells and fibers and types of connective tissue proper cartilage**,** bone matrix and cells, blood vessels and blood cells.

Course Code or Number: PHY 211
Course Title: General Physiology I

Contents: Introduction to physiology (Normal Function of the living organism in terms of its tissues, organs and systems. Blood constituents, Autonomic nervous system, Excitable tissues (nerve and muscle), and endocrinology

Course Code or Number: ANT 222
Course Title: Human Anatomy 2
Contents: study of the anatomy of the head and neck including muscles, blood and nerve supply bone and lymphatic drainage. The course also includes the study of salivary glands, tongue as well as nasal and maxillary sinuses
Course Code or Number: ELC 01, ELC 02, ELC 03
Course: Elective
Contents:

Course Code or Number: RDM 222
Course Title: Dental Biomaterial 2
Contents: study the composition, properties and behavior of the various biomaterial systems that the dentist and dental technician, description of restorative materials, impression materials, denture base, model materials, endodontic and implant materials.
Pre-requisite: RDM 211

Course Code or Number: UGE 03
Course Title: English 3
Contents: A required course designed to establish advanced reading and writing skills. Emphasis on essay writing as well as research techniques. The major project is an expository research paper. Academic styles are emphasized.
Pre-requisite: UGE 02.

Course Code or Number: OB 212
Course Title: Oral Biology &Embryology
Contents: The understanding of the microscopic structure of teeth and contiguous tissues and thereby provides an important source for decisions about dental treatments. The embryology segment gives the student an appreciation of the normal development of the major organ systems and some insight into the bases of craniofacial malformations.

Course Code or Number: HST 222
Course Title: General Histology 2
Contents: The course studies the tissues of various human body systems as nervous, circulatory, lymphatic, digestive, endocrine and urinary systems.
Pre-requisite: HST 211

Course Code or Number: PHY 222
Course Title: General Physiology 2
Contents: functions and functional limits of various systems of the human body under variable physiological conditions. Circulatory, digestive, respiratory, urinary and central nervous system.

Course Code or Number: UGE
Course Title: Arabic languages skills
Contents:

Course Code or Number: RD 311
Course Title: Restorative Dentistry 1
Contents: Basic principles of cavity preparation, treatment planning of diseased or damaged tooth to proper function and esthetics. Control using hand instruments and hand pieces, prepare occlusal, facial and lingual, and restore prepared cavities with dental amalgam in Phantom lab.
Pre-requisite: RDM 222

Course Code or Number: FPR 311
Course Title: Fixed prosthodontics 1
Contents: The principles and techniques of tooth preparation for fixed prosthodontics**,** fabrication of provisional restorations, full veneer crown preparation, classification of impression materials, Alginate impression, fabrication of metal-ceramic crowns and all ceramic crowns.
Pre-requisite: RDM 222

Course Code or Number: RPR 311
Course Title: Removable Prosthodontics 1
Contents: Study of maxillary and mandibular landmarks, impression trays and materials, jaw relations and face bow. Then acrylic complete denture construction starting from mounting of the models on articulators, selection and setting of teeth, waxing, flasking, packing and curing of Poly Methyl methacrylate, finishing and polishing of the deflasked dentures, also demonstrate and explain possible defects in cured dentures and how to avoid them, repair and reline of dentures.
Pre-requisite: RDM 222

Course Code or Number: OPTH 311
Course Title: Oral Pathology 1
Contents: Histopathology of oral lesions, oral white lesions, premalignant lesions, differences between benign & malignant tumor, salivary gland tumors. Examination, and abnormalities in the oral and maxillofacial region.

Pathogenesis of apical, periapical and bone lesions. Clinical differential diagnosis using clinical, radiographic, microscopic or biochemical.
Pre-requisite: OB 212

Course Code or Number: OB 321
Course Title: Oral Biology &Embryology 2
Contents: The microscopic structure and function of soft and hard tissues components of orofacial region, it includes the oral mucosa, salivary glands, the bony structure of maxilla and mandible. The embryology identifies the normal development of the major organ systems and some of craniofacial malformations, the structure and dynamic changes of alveolar bone and associated eruption and shedding mechanisms of teeth during growth and functioning.
Pre-requisite: HST 222

Course Code or Number: PHM 311
Course Title: Pharmacology (I)
Contents: Principles of pharmacology to include drug names, pharmacokinetics, pharmacodynamics, routes of drug administration, therapeutic effects, indications and contraindications of drugs.
Pre-requisite: CHM 122

Course Code or Number: MCR 311
Course Title: General Microbiology and Immunology 1
Contents: Bacterial structure, physiology and genetics, Viral structure and function. The course also includes Bacterial and viral diseases of the respiratory tract, skin, GI tract, UG tract. Innate and adaptive immunity, Immune responses to infection, immunodeficiency and autoimmunity. Analyze major mechanisms of infectious disease and the resultant responses of the host. Evaluating virulence mechanisms.
Pre-requisite: BOT 122

Course Code or Number: PTH 321
Course Title: General Pathology 2
Contents: This course involves a study of the diseases of the various body systems as developmental, bone, circulatory, respiratory, digestive, endocrine, and immune and nervous systems. Different types of tumors will also be discussed.

Course Code or Number: OMR 312
Course Title: Dental Radiology

Contents: Radiation physics and biological effects of radiation. It provides the students with detailed description of x-ray machine, digital radiography, and different intra- and extra-oral techniques. Also the student will be educated how to interpret different x-rays together with anatomical landmarks and to identify radiographic artifacts to differentiate from pathologic conditions.
Pre-requisite: ANT 222

Course Code or Number: RDE 312
Course Title: **Endodontics 1**
Contents: The biology, Pulp space Anatomy of all teeth with their abnormalities, pathology, diagnosis, treatment, and outcome of dentin-pulp complex and pulpal-related periradicular pathology. Preclinical laboratory component covers endodontic treatment techniques on extracted teeth from different tooth groups as practice for clinical cases. Students will learn to deal with clinical procedures particular to endodontics,
Pre-requisite: RD 311

Course Code or Number: RD 322
Course Title: Restorative Dentistry 2
Contents: preparation of Class II, III, IV, V and MOD cavities, cement basing and luting, proper selection and use of restorative materials, dental matrices and restore prepared cavities with dental amalgam, inlays, composite and glass ionomer in Phantom lab.
Pre-requisite: RD 311

Course Code or Number: FPR 322
Course Title: Fixed prosthodontics 2
Contents: Identify the biomechanical principles of tooth preparation. Extra-coronal single teeth restorations, preparation of full veneer crowns, metal-ceramic crowns and all ceramic crowns. Fabrication of provisional restorations. and classification of impression materials for crown restorations. Alginate impression
Pre-requisite: FPR 311

Course Code or Number: RPR 322
Course Title: Removable Prosthodontics 2
Contents: Removable Partial Denture "RPD" construction**,** surveying and its principle, different types of metallic RPD's, their designs and the mechanical principles of designing. Fabrication of working models, duplication, waxing, investing and casting. As well as acrylic partial dentures, design, advantages and disadvantages.
Pre-requisite: RDM 222

Course Code or Number: OPTH 322
Course Title: Oral Pathology and Forensic Dentistry 2
Contents: This course presents the etiology, pathogenesis, clinical and radiographic appearance, treatment, and histopathology of local and systemic diseases that affect the oral & Para oral tissues. Diagnosis of developmental, inflammatory, metabolic, neoplastic and miscellaneous diseases.
Forensic dentistry, gives the student the ability to know about both dentistry & law & their relation Perform correct management, examination, evaluation & presentation of dental evidence in criminal or civil proceedings in the interest of justice
Pre-requisite: OB 321

Course Code or Number: PHM 322
Course Title: Pharmacology (II)
Contents: Emphasis on antibiotics, anti inflammatory, anti fungal and local drugs related to dental conditions.
Pre-requisite: PHM 311 (co-req)

Course Code or Number: MCR 322
Course Title: Oral Microbiology and Immunology 2
Contents: The course starts with Analysis of microbial diseases and progresses through viral diseases, candidacies, prior diseases ending with oral ecology/microbiology and periodontal diseases. Mucosal spread of disease and mucosal diseases, role of microorganisms in human dental diseases, and plaque related microbial diseases.
Pre-requisite: MCR 311

Course Code or Number: CD312
Course Title: Dental Clinic Management & Infection Control
Contents: Definition of infection control, common infections in dentistry, vaccinations, hand hygiene, personal protective equipments, different types on sterilization and disinfection, definition of dental waste and how to manage each type.

Course Code or Number: OMD 411
Course Title: Oral Medicine and Diagnosis 1
Contents: fundamentals of oral diagnosis as concern both intra-oral extra-oral examination and systemic background using all scientific tools and methods via chief complaints and history of the lesions. Differential diagnosis and laboratory investigations as, radiographs, Blood, bleeding disorders. Complications and how to avoid it during the dental management.

Course Code or Number: RDE 421
Course Title: Endodontics 2
Contents: diagnosis of endodontic case, Preparation, obturation, diagnosis and treatment of endodontic emergencies and surgical management of endodontic problems. The basic techniques and hand skills required for beginning endodontic practice in the clinic.
Pre-requisite: RDE 312

Course Code or Number: RD 431
Course Title: Restorative Dentistry 3
Contents: Dental chair & operator position, Patient assessment Examination and diagnosis, Caries assessment & management. Moisture control in operative dentistry. Temporization and Glass ionomer restoration.
Pre-requisite:RD322

Course Code or Number: FPR 431
Course Title: Fixed Prosthodontics 3
Contents: the biomechanical principles of tooth preparation, planning and designing restoration of missing teeth and endodontically treated teeth with fixed prostheses. Preparation of full veneer, metal-ceramic and all ceramic crowns, classify impression materials, working cast, fabrication of provisional restoration, try in and final cementation.
Pre-requisite: FPR 322

Course Code or Number: RPR 431
Course Title: Removable Prosthodontics 4
Contents: Examine, diagnose & clinical removable prosthodontics treatment for completely edentulous patients. Importance of mechanical and biological factors for the success of complete dentures. Diagnosis & treatment of the post insertion complains. Relining, rebasing and repairing old dentures.

Pre-requisite: RPR 311, RPR 322

Course Code or Number: OS 411
Course Title: Local Anesthesia & pain control
Contents: Pharmacology, administration and Techniques (oral, inhalation, intravenous) of local anesthesia. Anatomy, physiology and nerve conduction of the oral-facial region Pharmaco-dynamics and metabolism of local anesthetics. Acute pain and dental fear control. Complications of Local Anesthesia (Local & Systemic) & office emergencies.

Course Code or Number: PI 411

Course Title: Periodontology 1

Contents: Criteria and histology of normal periodontium and gingiva. Classification of periodontal diseases, bacteria involved in periodontal diseases, etiology with theories of dental plaque formation. Immunity and inflammation, together with different microbial interactions, instruments used for periodontal treatment and surgery.

Course Code or Number: OR 411
Course Title: Orthodontics 1
Contents: The basic information in orthodontics, caraniofacial growth and development, development of normal occlusion, malocclusion; definition, forms and etiology, serious sequels of untreated malocclusion, ending with best timing of patient referral, and practicing the basic components of orthodontic appliance.

Course Code or Number: GSR411, GSR 422
Course Title: General Surgery, E.N.T. & Ophthalmology 1 and 2
Contents: General surgery, infection, wounds, burns, electrolytic balance, shock and blood transfusion. Neoplastic surgeries, surgeries of thyroid and salivary glands as well as emergency care.
Ear, nose and throat, surgery of the nasal sinuses,
Ophthalmology including eye surgeries and traumatic injuries as well as the relation between teeth and eye diseases

Course Code or Number: GMD 411 & GMD 422
Course Title: General Medicine, Dermatology & Venereal Diseases
Contents: Diagnosis and treatment of systemic diseases, circulatory, digestive, respiratory, nervous and endocrine systems. The course also includes skin diseases and skin manifestations of various diseases. the oral manifestations of various diseases, the precautions needed to be taken during dental procedures for patients with certain systemic diseases, as well as the proper interpretation of laboratory findings & EKG's.

Course Code or Number: OMD 422
Course Title: Oral Medicine 2
Contents: Etiology and oral manifestations of common vesiculobullos ulcerative lesions, oral red, white lesions affecting the oral cavity and various skin manifestation associated with this lesions. Differential diagnosis, management of such lesions, and management of this lesions explaining the complications that might occur upon them.

Course Code or Number: RDE 432
Course Title: Endodontics 3
Contents: Endodontic radiography, vital pulp therapy, management of the open apex, endodontic emergency treatment, and traumatic emergency
Pre-requisite: RDE 421

Course Code or Number: RD 442
Course Title: Restorative Dentistry 4
Contents: Selection of the suitable restorative materials, Caries assessment & management. Composite as an anterior and posterior restorative material, and shade selection.
Pre-requisite: RD 431

Course Code or Number: FPR 442
Course Title: Fixed Prosthodontics 4
Contents: General fundamentals in treatment planning, indications, material selection, and fabrication of esthetic veneer restorations for fixed prostheses Designs of resin-bonded ultraconservative prostheses and resin or ceramic veneered fixed prostheses. Color applications in esthetic restorations and shade selection.
Pre-requisite: FPR 431

Course Code or Number: RPR 442
Course Title: Removable Prosthodontics 4
Contents: Examine, diagnose & design partially edentulous patients. The biological and mechanical considerations required designing, constructing and maintaining removable partial denture. Diagnose & treat the post insertion complains. Reline and repair old dentures
Pre-requisite: RPR 431

Course Code or Number: OS 422
Course Title: Oral Exodontia
Contents: Exodontia: Indications & Precautions of tooth/root removal; Patient's clinical & radiographic evaluation; & factors complicating extraction. Forceps extraction of teeth (Intra-alveolar Extraction). Elevators extraction & root removal: types, indication & precautions. Surgical removal of teeth & roots (Trans-alveolar extraction). Impacted teeth: indications, contraindications, classifications, basic surgical steps & armamentarium, modified techniques for maxilla, mandible, & aberrant positions. And complications of oral surgery & Exodontia
Pre-requisite: OS 411

Course Code or Number: PI 422
Course Title: Periodontology 2
Contents: Classification and theories of formation of dental calculus. Local and systemic predisposing factors of periodontal diseases and their specific effect periodontal infection on systemic health.
Pre-requisite: PI 411

Course Code or Number: OR 422
Course Title: Orthodontics 2
Contents: Foundation of orthodontic procedure, interpretation of orthodontic records; photographs, casts, panoramic and lateral cephalometric, biology of tooth movements and types of forces used to move teeth, preventive and interceptive methods for malocclusions, and different treatment protocols.
Pre-requisite: OR411

Course Code or Number: OMD531
Course Title: Oral Medicine 3

Contents: Endocrinal diseases and the associated oral lesions (the effects of the hyperfunction and hypofunction of the endocrinal glands). Complications & Management of Diabetes mellitus, Dental management of patients with cardiovascular, bleeding and clotting disorders.

Course Code or Number: RDE 541
Course Title: Endodontics 4
Contents: Root resorption, endodontic periodontal relations, non-surgical management of teeth with periradicular lesions, periradicular surgery, tooth discoloration and bleaching
Pre-requisite: RDE 432
Course Code or Number: RD 551
Course Title: Restorative Dentistry 5
Contents: Restoration of badly destructed teeth, esthetic consideration in operative dentistry, mechanism and factors affecting bonding to tooth structure. Problem solving and dealing with different types of patient's regarding their satisfaction. And using several materials as choices to restore different defects
Pre-requisite: RD 442

Course Code or Number: FPR 551
Course Title: Fixed Prosthodontics 5
Contents: Indications, contraindications, and different types of all ceramic restorations. Different systems for construction of machined ceramic

restorations. Indications, tooth preparation & cementation procedures for porcelain laminate tooth preparation. Writing instructions for laboratories and occlusal registration, diagnostic wax-ups, and the use of semi-adjustable articulators and face bows.
Pre-requisite: FPR 442

Course Code or Number: RPR 511,
Course Title: Removable Prosthodontics 5

Contents: The basic clinical management of completely or partially edentulous patients with special prosthetic designs. Propose a treatment plan based on clinical findings and on the patient's condition.

Pre-requisite: RPR 442

Course Code or Number: PDCD 511
Course Title: **Pediatric Dentistry 1**
Contents: principles of clinical care of children and adolescents concerning development and psychology, and behavior modification techniques. Fundamentals of restorative and preventive techniques unique to children.
Pre-requisite: RD442, RDE 432

Course Code or Number: OS 531
Course Title: Oral & Maxillofacial Surgery & Dental Implants
Contents: Salivary gland diseases: anatomical factors, special diagnostic aids, mucocele, ranula, sialolithiasis, Xerostomia, syndromes and tumors. Maxillary sinus Involvement: Odontogenic & non-Odontogenic infections, antral pathology, & management of maxillary sinusitis. Oral, Face, & Neck infections: microbiology, pathogenesis, dento-alveolar abscess, spread & fascial space infections, serious complications of infection, management, fate of infection, & basics of Antibiotic therapy. Pre-prosthetic surgery: bony abnormalities, soft-tissues abnormalities, ridge augmentation, & sulcus deepening. Oral Implantology, Replantation and Transplantation.
Pre-requisite:OS 422

Course Code or Number: PI 531
Course Title: Periodontology 3
Contents: Periodontal and gingival pathology. periodontal diseases with special emphasis on diagnosis, prognosis and treatment plan for each disease. Chemical plaque control. Using different periodontal surgical instruments, ultrasonic scalers, manual supra and subgingival scaling and root planing.
Pre-requisite: PI 422

Course Code or Number: PDCD 531
Course Title: Community Dentistry 1
Contents: Definition and core functions of public health, principles of epidemiology, types of studies, the main factors determining distribution of disease among population and different methods to measure a particular condition in a population.

Course Code or Number: OMD 542
Course Title: Oral medicine 4
Contents: Classifications and differential diagnosis of pigmented lesions affecting the oral cavity. Tuberculosis, ulcers and syphilis, various form of diseased teeth, and oral manifestations affecting HIV patients. Basic immunology and classification of immunologic diseases, which might have intra oral manifestations.

Course Code or Number: RDE 552
Course Title: Endodontics 5
Contents: Endodontic mishaps, detection, correction, and prevention. Nickel titanium rotary instruments. Restorations of endodontically treated teeth. Ultra sonic endodontics. Outcome of endodontic treatment and retreatment. And endodontic pharmacology.
Pre-requisite: RDE 541

Course Code or Number: RD 562
Course Title: Restorative Dentistry 6
Contents: Management of non-carious lesion, indirect esthetic restoration, failure of restoration, repair of restoration, and modern advances in restorative dentistry.
Pre-requisite: RD 551
Course Code or Number: FPR 562
Course Title: Fixed Prosthodontics 6
Contents: Periodontal and esthetic considerations into the scope of current dental practice. Post insertion care and follow up in fixed prosthodontics. Bridge removal and Bridge repair. Failure in fixed prosthodontics, bridge removal and Bridge repair. And prosthetic aspects of dental implants.
Pre-requisite: FPR 551

Course Code or Number: RPR 562
Course Title: Advanced removable Prosthodontics 6
Contents: The basic principles of maxillofacial prosthodontics, materials and techniques necessary for the fabrication of maxillofacial prosthetics and

nomenclature, classification, Maxillary defects, prosthetic, radiographic therapy, splints and stents, Removable prosthesis over implants and different types of attachments.
Pre-requisite: RPR 551

Course Code or Number: PDCD 522
Course Title: Pediatric dentistry 2
Contents: Treatment plan for a child dental patient, developmental anomalies, traumatic injuries and their treatment protocol. Management of children with special health care needs, medically compromised children as well as management of medical emergencies. Nonnutritive oral habits in children.
Pre-requisite: PDCD 511

Course Code or Number: OS 542
Course Title: Oral & Maxillofacial Surgery& General Anaesthesia
Contents: Management of traumatic injuries to the maxillofacial region (Fractures of the mandible & middle third of facial skeleton) types, clinical & radiographic diagnosis, & techniques for management**.** Maxillofacial pathology (Cysts, Benign & Malignant tumours)**.** TMJ disorders and jaw deformities. Orthognathic surgery for maxilla & mandible, osteoarthritis, ankylosis, and dislocation**.** General Complications of oral surgery. Management of Osseous Defects**. And** principles of sedation & General anesthesia.
Pre-requisite: OS531

Course Code or Number: PI 542
Course Title: Periodontology 4
Contents: Conventional and recent advances in management and treatment of periodontal diseases. Guidelines of resective and reconstructive periodontal and mucogingival surgeries using different types of bone grafts.
Pre-requisite PI 531

Course Code or Number (PDCD 542)
Course Title: Community 2/ Preventive Dentistry
Contents: Description of definition preventive dentistry, levels of prevention, fluoride in environment and uptake by man, fluoride toxicity, uses & application of fluoride. Sealant application. And measures to prevent caries & periodontal diseases.

6. Admission Requirements:

- Students must hold the Egyptian high school certificate, or an equivalent certificate accepted by the Supreme Council of Egyptian Universities.

- Students are nominated for admission to the faculty according to the rules of the Supreme Council of Private Universities.
- Foreign students are nominated for admission to the faculty according to the general regulations of the ministry of higher education.
- Students must fulfill all requirements and comply with the rules of the faculty.

Full-time study is a requirement for all students

7. Regulations rules for program course completion

a. Students Transfer:

Students may transfer from accredited Egyptian, foreign, private or governmental faculties of dentistry, to, Pharos University under the following conditions:

- Students must have at least 2.0 cumulative GPA.
- Required curricula passed by the student at original university that have counterparts at Pharos University will be considered for accreditation. Those which do not have counterparts at Pharos University will be considered as electives.
- Grades of Egyptian high school certificate or equivalent degrees are not less than what was determined by the University council.
- Students must pass entry exams determined by the University Council.
- Students must spend **at least 6 semesters** at Pharos University.

b. Faculty Education System

- English is the medium of instruction. All faculty courses are assigned a credit hour value. Generally each one hour lecture is equivalent to one credit. Two hours laboratory session per week, are equivalent to one credit, unless otherwise specified by the degree plan.
- The academic year is divided into three terms (Fall, Spring, and Summer). The fall and spring terms are fifteen weeks each, while the summer term is only six weeks.
- Selected courses by the faculty may be offered in the summer term in which students can register in not more than three courses, according to the regulations of the faculty.
- To obtain the BDS degree, undergraduates are required to pass successfully at least **209** credit hours.

- Successful candidates may terminate the full requirements in 5 academic years.

c. Academic Advising

Advisors are expected to:

- Decide with each student, individually, his/her class sheet for each semester before registration.
- Follow-up student's performance during each semester.
- Help and solve academic and/or behavioral problems, if any.
- Approve on course dropping, adding or withdrawal at assigned dates.

d. Registration Procedure

1. Registration

Students are required to register at the beginning of each semester during the assigned registration period. Candidates select courses with the consultation of the academic advisor who must approve their work-load before registration. The registration department issues a regulation bulletin as well as the procedures to be followed.

2. Late registration

Candidates are allowed to register with maximum two weeks after the registration deadline, with the approval of the dean of the faculty.

3. Adding and dropping subjects

Candidates may add or drop a course during the period announced on the time-table of each semester as long as his/her work load remains within the permitted load limit

e. Withdrawal

Candidates have the right to withdraw from an academic semester within the withdrawal period announced on the academic calendar of the semester.

f. *Attendance*

If the student's attendance is below 75% of the total number of hours in any course throughout the semester (with or without excuse) he/she should drop the course altogether. Otherwise, he/she will receive an (F) grade in the course evaluation.

g. Worksheets

Curriculum requirements leading to graduation are recorded on a worksheet kept in the student's folder. Worksheets are available in the registration office.

8. Examinations and Grading System

A. Examinations:

1. The final grade awarded to the student in a course is usually based on the sum of the first quiz, mid term and final grade exam of each semester.
   Grades are distributed as follows:

   10% **Quiz**
   20% **Mid term exam**
   20% **Assignments**
   50% **Final exam**
2. Each credit is allotted a total of 100 points.
3. The pass mark for each course is 60%
4. A student can carry a maximum of two courses for a summer session

B. Grading System

Grade		Numerical Average	Grade Points
Excellent	A	$90 \leq X < 100$	4.0
Excellent	A-	$85 \leq X < 90$	3.7
Very good	B^+	$80 \leq X < 85$	3.3
Very good	B	$75 \leq X < 80$	3.0
Good	B^-	$70 \leq X < 75$	2.7
Good	C^+	$65 \leq X < 70$	2.3
Pass	C	$60 \leq X < 65$	2.0
Pass Conditional	C^-	$56 \leq X < 60$	1.7
Pass Conditional	D+	$53 \leq X < 56$	1.3
Pass Conditional	D	$50 \leq X < 53$	1.0
Fail	F	$X < 50$	0.0

A student gets an E or NE grade in a course if he/she does not attend the final examination in that course. Grades E and NE are failing grades and carry no grade points.
Grade E is awarded to candidates absent in the final examination who present an accepted excuse. While grade NE is awarded to those who are absent during the final examination without excuse or with a non-approved excuse.

Grade-Point Average

The current grade-point average (Current GPA) and the cumulative grade-point average (Cumulative GPA) are calculated as indicated below:

Example:

Course	Credit Hours	Grade	Grade Point	Quality Point
Title 1	3	A	4	12
Title 2	3	B^-	2.7	8.1
Title 3	4	A^-	3.7	14.8
Title 4	3	C	2	6
Title 5	2	NE	0	0
Title 6	3	F	0	0
	18			**40.9**

Therefore the current GPA = 40.9/18 = 2.272
The current GPA is an average determined by weighting each grade awarded during a one term study

- A student is considered under academic probation for 2 subsequent academic years if he/she records less than 2.0 cumulative GPA.
- A student must raise his/her GPA in the first year and by the end of the second semester, he/she must record 2.0 cumulative.
- During academic probation, a student may not register for more than 14 credits per semester, beside English courses.
- A student under academic probation may not join extra curricular activities such as sports teams, etc.
- A student under academic probation has to meet his/her academic advisor at least twice per month to follow up his/her academic performance and solve difficulties as they may arise.

Student Suspension and Re-registration

- If the student fails to obtain 2.0 GPA at the end of the academic probation, he/she is suspended from attending the faculty.
- A student may submit a petition explaining circumstances that caused failure of recording 2.0 GPA cumulative.
- University Council may allow re-registration on conditions that help the students to proceed for graduation.

Course Repeat for Students with C, D, E

- A student may repeat a course if he/she scores a grade less than C in that course.
- Approval of the Academic Advisor and Faculty Council are required.
- A student may register for summer course in certain subjects for the time if he/she holds a GPA>3.0 and after consultation and approval of Academic Advisor and Faculty Council.
- Final grade is based on the better score.
- Both grades are shown in transcript.

Course Repeat for Students with F

- A student may repeat a course if he/she scores an "F".
- If the student passes the re-sit exam, he will be awarded his/her grade or "C" as a maximum.
- Credits of the course are registered in the student's record.

Postpone Final Examination of a Course or More

- In case of serious circumstances, a student may postpone attending the final examination of a course(s) till the following semester with the approval of the Faculty Council.

Graduation Requirements

- Students must fulfill the attendance requirements for practical and clinical training for each course.
- Students are required to pass all courses offered in the curriculum with a minimum grade "D".
- A cumulative GPA of minimum 2.0 is required
- If a student is a transfer from another university, he/she must spend at least 6 academic semesters at Pharos University in order to obtain the degree.

Graduation Honors

- High Honor: When a student records 3.7 or higher cumulative GPA.
- Honor: When a student records 3.3 to less than 3.7 cumulative GPA.

Internship Training/Rotation

- Internship year of rotational training is required to practice dentistry.

- High honor and honor students may obtain their training at the Faculty premises
- Student's rotation schedule is settled via the Faculty with the appropriate hospitals.

Affiliation with Other Universities

- Faculty of Dentistry Board may request affiliation with other Egyptian or foreign university that provides similar quality of education.
  A student registered at Pharos may spend a maximum of 2 semesters and study not more than 6 courses in affiliated university.

Academic Plan

- The Faculty of Dentistry has developed an innovative program that meets the current and future needs of Dentistry.
- The curricula and courses offered are presented in detail using the given course coding system.

Course Coding System

The course starts with a certain abbreviation related to the subject followed by a 3-digit number like Chemistry …CHM

The 3-digit number

Classified as follows:

- First digit refers to the academic year
- Second digit refers to levels of field of specialization
- Third digit refers to the semester

9. Methods and Rules of Student's Evaluation:

Methods	Program Intended Learning Outcomes
Written exams	knowledge & Understandings, Intellectual Skills and Professional skills
Oral exams	knowledge & Understandings,Intellectual Skills and general skills
Practical exams	Professional skills
*Research projects	knowledge & Understandings, Intellectual Skills,

	Professional skills and general skills
Research reports	knowledge & Understandings, Intellectual Skills, Professional skills and general skills
*Competency test exam	General knowledge & Understandings, Intellectual Skills, Professional skills and general skills

***Comprehensive Clinical Case (CCC) and Research projects:**

The CCC treatment program and the 5th year students' researches were incorporated for the first time in the Egyptian universities. It encourages students to conduct scientific researches and innovation.

First, regarding the ***CCC treatment program,*** all students are given the opportunity to deal with different cases which need treatment from different specialties. They are trained to implement a comprehensive treatment plan using different advanced diagnostic aids and therapeutic equipment like ENDOMICROSCOPE CBCT ,CAD-CAM . and a dental implant unit was designed for this purpose.

These cases are evaluated by a committee that is headed by the dean and consists of expert university professors to discuss the treatment plan before implementation.

The CCC grades are considered part of the "students' requirements grades" in five different branches (Operative, Endodontics, Fixed prosthodontics, Removable prosthodontics and Periodontology) and are distributed according to the credit hours of every curriculum.

After completion of treatment, the case is presented in front of an internal committee that consists of the dean and the staff members, then, it is presented in front of an external committee of professors from different universities, to assess the work and state the final grades.

The treatment project in Pharos University contributes socially in treating the low socioeconomic status patients, as the student pay all the expenses needed for the treatment completion. It also raises the health awareness in the Egyptian society.

Second, the fifth year students are assigned to conduct ***scientific researches*** which must contain scientific studies and experiments done under the supervision of staff members and reach results and recommendations.

These researches are presented in front of a committee, that consists of an elite of Pharos and other university professors for assessment. **The research grades are considered part of the student assignment grades required from the students in the same five subjects.** It enhances the students' research skills, thus enhancing their ability to keep track with the latest technological advancements in the dental field. This makes the students ready for the work field, research and postgraduate studies.

An annual ceremony is made, in which all the fifth grade students are honored, certificates are given to the first place students in the CCC cases and researches anda their pictures are placed on an honour board.

10. Methods of Program Evaluation:

Evaluator	Tool	Sample
Students last level	Questionnaires and periodic meeting	Questionnaires 20%
Graduates	Questionnaire and periodic meeting	Questionnaires 20%
Stakeholders (employers)	Questionnaire and periodic meeting	One meeting / year
External evaluator	Reviewing of the specifications of the program and the courses according to the bylaw	At least one reviewer professor in the specialty

Faculty Dean **Program Coordinator**